We claim:

1. A process for one-stage preparation of polyoxyalkylene glycols by copolymerizing tetrahydrofuran and alpha,omega-diols in the presence of a heteropolyacid and of a hydrocarbon, which comprises distilling water in a mixture with this hydrocarbon out of the copolymerization.

2. A process as claimed in claim 1, wherein an aliphatic or cycloaliphatic hydrocarbon having from 5 to 12 carbon atoms or an aromatic hydrocarbon having from 6 to 12 carbon atoms or a mixture thereof is used.

3. A process as claimed in claim 1 or 2, wherein the hydrocarbon used is pentane.

4. A process as claimed in any of claims 1 to 3, wherein tetrahydrofuran is distilled off at the same time.

5. A process as claimed in any of claims 1 to 4, wherein the mixture of hydrocarbon, water and optionally tetrahydrofuran are distilled at from 40 to 120°C and a pressure of from 150 mbar to 2 bar.

6. A process as claimed in any of claims 1 to 5, wherein the hydrocarbon or the hydrocarbon/tetrahydrofuran mixture is recycled after drying.

7. A process as claimed in any of claims 1 to 6, which can be carried out continuously or batchwise.

8. A process as claimed in any of claims 1 to 7, wherein the alpha,omega-diol used is neopentyl glycol.

Preparation of tetrahydrofuran copolymers

Abstract

The present invention provides a process for one-stage preparation of polyoxyalkylene glycols by copolymerizing tetrahydrofuran and alpha,omega-diols in the presence of a heteropolyacid and of a hydrocarbon, which comprises distilling water in a mixture with this hydrocarbon out of the copolymerization.